

**DOCKET NO.:** 137159.00101  
**Application No.:** 10/595,982  
**Office Action Dated:** April 26, 2010

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:  
**Sparkes, Vernon W. et al.**

Confirmation No.: **1264**

Application No.: **10/595,982**

Group Art Unit: **3611**

International Filing Date: **December 6, 2004** Examiner: **Scharich, Marc A.**

For: **Pivoting Hitch Assembly**

**DECLARATION PURSUANT TO 37 CFR § 1.132**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Mr. Vernon W. Sparkes, declare as follows:

1. I am a citizen of Canada, and currently reside at 5004 Norquay Drive, NW, Calgary, Alberta, Canada T2K 2L3.
2. I am a co-inventor of the claimed subject matter of U.S. Patent Application Serial Number 10/595,982 ("the 982 application").
4. I have been asked to provide this affidavit regarding the design and development of the Ditch Hitch® pivoting hitch assembly product as well as the outstanding rejection of the patent application for the pivoting hitch assembly. I am not receiving any separate or additional compensation for my time spent in preparing this affidavit.
5. I have read and I am familiar with the 982 application and the description therein of the embodiments of the invention for the Pivoting Hitch Assembly. I have read and have a

general understanding of the subject matter recited in the claims of the 982 application. I have also read and generally understand the proposed amendments to the claims being submitted along with my declaration.

6. It has been explained to me by our patent attorney, and it is my understanding, that the 982 application is currently pending before the United States Patent and Trademark Office and that certain claims of the 982 application are currently rejected as being unpatentable as anticipated (i.e., not novel) and/or obvious in view of certain other patents.

7. I am a 50 year old safety specialist working in the oil and gas industry but my experience with vehicle recovery began while growing up on a farm. Working with cattle and in the fields, our trucks and equipment would often get stuck in the mud or snow. We'd use ropes, chains, tow hooks, tow ropes with tail chains or whatever was available to get unstuck. If the truck was a long way off the road, we'd attach several ropes together with shackles to reach the stuck vehicle. We'd attach to the bumpers, towing hitches on the trucks, wrap it around one of the axles or to whatever we could find to tie off the chain, rope or tow strap to the pulling and stuck vehicles. The driver would get in and pull the chain tight and accelerate until the tires were spinning. Then he'd back up a few feet and gun the engine to yank the vehicle out of the ditch. That was when everyone that was watching would run for the opposite ditch in case something broke. It would depend on the situation how many times the "back up and gun it" approach would take to eventually get the person out or damage the vehicles. With luck, no one would be injured or killed in the process.

8. Years later while working on the oil rigs, we operated in extreme weather conditions normally in very remote areas. If one of our vehicles got stuck (which happened often), we all did the exact same thing as we used to do on the farm. We used whatever we had on hand to get the vehicle unstuck and get back to work. Sometimes our vehicle recovery efforts were successful; other times there were accident reports to be filed.

9. In the mid-1990's, I trained to become a Safety Specialist within the oil and gas industry. While working for a large, international oil company, one of my responsibilities was to

give all site personnel Orientations and Training on safe work practices. On the topic of vehicle recovery, I was instructed by my employer to tell all personnel that under no circumstances were they to perform any vehicle recovery operations. My employer told me that because there was nothing available on the market designed to withstand the shock load of vehicle recovery, all personnel were to call a tow truck only - no exceptions.

10. The "tow truck only" policy was met with great resistance by the site personnel who knew how often they would get stuck and how long it would take to wait for a tow truck in these remote areas. I explained that they were not allowed to use chains, slings with tail chains, tow ropes with hooks, shackles, trailer balls or pintle hitches. They would ask me, "Well, what can we use?" I told them there was nothing that they could safely use for vehicle recovery and reinforced the 'tow truck only' policy. However, I sympathized with their situation, understood their frustrations, and as a result was inspired to come up with a solution to the problem.

11. The solution was a pivoting hitch assembly, which is shown and described in the 982 application. The pivoting hitch assembly, embodied in the Ditch Hitch® pivoting hitch assembly product, provides an effective and cost efficient solution that is strong, lightweight, simple and reliable.

12. Early designs and prototypes of the pivoting hitch assembly were constructed entirely of steel. These prototypes used both commercially available anchoring pins (AISI 1040 steel) as well as our specially fabricated pins (AISI 4140 normalized steel alloy) supplied with the unit. Testing of the steel units at the University of Calgary civil engineering labs was conducted with Dr. Shaw. The test results were impressive. Additionally, in field tests, the design worked flawlessly for vehicle recovery. The problem was the weight. At 28 lbs, the units were too heavy for practical use. Lifting and inserting the unit into the vehicle receiver was difficult and awkward due to its weight and could result in back strain or injuries if dropped. Another problem was corrosion/rust. Although functional, the heavy steel pivoting hitch assembly was not practical or easy to use.

13. With Dr. Shaw, I discussed the possibility of using a lighter material such as aluminum for the pivoting hitch assembly, but he advised that it was a weaker material and that we could lose breaking strength. Running out of options, I felt I had nothing to lose by trying an aluminum model. Using the exact same size and configuration, I had a prototype unit constructed out of 6061-T6511 aluminum – a light weight, marine grade aluminum that would withstand corrosion and damage from road salts. The anchoring pins were made of the same AISI 4140 steel as previously tested. When complete, the aluminum unit weighed 7.5 lbs.

14. A full scale test was conducted on the aluminum model at the University of Calgary civil engineering lab, again under the direct and active supervision of Dr. Shaw. Testing of the aluminum model resulted in a maximum load 15% higher load than a steel model. Dr. Shaw stated that the results were totally unexpected and not obvious to a mechanical engineer working in this field. I now had a vehicle recovery tool that was strong, portable, light weight and easy to use.

15. Since the time of my initial design and prototype testing, use of the Ditch Hitch® pivoting hitch assembly product has become widespread, mainly through word of mouth with very limited advertising. The competition was old technology such as hooks and chains, winching or hoisting shackles, ropes and cables that tend to break, snap or release at the weakest link creating a dangerous situation that had caused injury and even death. When used under severe conditions such as shock loading or off centre pulling, these conventional products failed.

16. Thousands of Ditch Hitch® units have been sold to companies who previously had experienced vehicle recovery incidents and/or had been forced to implement “tow truck only” policies. Many of these companies are large, multi-national corporations that use all the latest advancements in automotive safety. See a partial listing of existing customers attached as Exhibit A. These companies are sophisticated companies that deal directly with original vehicle manufacturers (OEMs), vehicle parts suppliers, hoisting and rigging suppliers and thousands of other materials and service suppliers. I have been told that since using the Ditch Hitch® pivoting hitch assembly product many of these companies have reduced and/or eliminated

vehicle recovery incidents and lifted “tow truck only” policies. They were aware that they had been using tools never designed for vehicle recovery, however, were forced to “make due” as there was nothing commercially available for this purpose. Documented and anecdotal feedback indicated astonishment as to why something like the Ditch Hitch® pivoting hitch assembly product had not been thought of before. Attached in Exhibit B are several testimonials from existing users of the Ditch Hitch® pivoting hitch assembly.

17. Enform Canada (Enform) is the safety association for Canada’s upstream oil and gas industry. Enform requested input from me as a subject-matter expert on the recently issued Vehicle Recovery and Towing Guideline (attached as Exhibit C) and I am named in the Acknowledgements. The Guideline states “Ensure vehicle hitch receiver and all components (especially pins) are sufficiently rated for recovery,” and further recommends the use of “an engineered recovery device designed for a hitch receiver.” The industry Guideline provides a picture of the Ditch Hitch® pivoting hitch assembly, but because Enform must remain vendor and product neutral the Ditch Hitch® product was not identified by name.

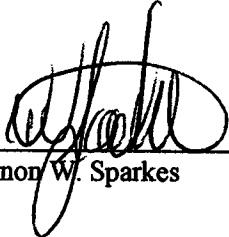
18. The Ditch Hitch has successfully filled an accident-stricken void in the vehicle recovery market. It is sold as both a vehicle safety device as well as an after-market towing tool. Ultimately, the Ditch Hitch® pivoting hitch assembly is easy to handle and use, due to its lightweight design, and prevents needless vehicle damage, bodily injuries and fatalities while getting a vehicle unstuck and has become a dominant player in the safe vehicle recovery systems industry.

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19. I further declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

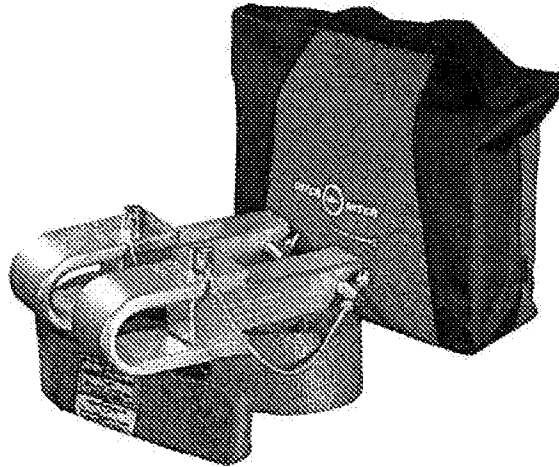
Date: Sept 01/2010

  
\_\_\_\_\_  
Vernon W. Sparkes

**EXHIBIT “A”**

**OF DECLARATION OF  
MR. VERNON W. SPARKES**

## Exhibit A



DHSC Super  
Complete Kit

### Ditch Hitch Partial Customer List

- |                              |                               |
|------------------------------|-------------------------------|
| ❖ Alliance Pipeline          | ❖ Keyera Energy               |
| ❖ Apache Canada              | ❖ Manitoba Hydro              |
| ❖ Atco Electric              | ❖ Nexen Canada                |
| ❖ Atco Pipelines             | ❖ Pearl Exploration           |
| ❖ Big Eagle Hydro-Vac        | ❖ Pembina Pipelines           |
| ❖ British Petroleum          | ❖ Penn West Energy Trust      |
| ❖ Burlington Resources       | ❖ Petro Canada                |
| ❖ Canadian Natural Resources | ❖ Pioneer Natural Resources   |
| ❖ Champion Technologies      | ❖ Quick Silver Resources      |
| ❖ Conoco Phillips            | ❖ Stoneham Drilling           |
| ❖ Devon Canada               | ❖ Suncor Energy               |
| ❖ Enbridge Pipelines         | ❖ Talisman Energy             |
| ❖ Encana                     | ❖ Terra Core Drilling         |
| ❖ Exxon Mobil                | ❖ Thompson Bros. Construction |
| ❖ Harvest Energy             | ❖ Veritas Geophysical         |
| ❖ High Pine Oil & Gas        |                               |
| ❖ Hunt Oil                   |                               |
| ❖ Husky Energy               |                               |

...And Many Others

**EXHIBIT “B”**

**OF DECLARATION OF  
MR. VERNON W. SPARKES**



**HUNT OIL COMPANY OF CANADA, INC.**

Suite 3100, 450 - 1st Street SW  
Calgary, Alberta, Canada T2P 5H1  
Main: 403-531-1530

May 13, 2005

In regards to: Ditch Hitch Product

Tugko Inc.  
5004 Norquay Drive N.W.  
Calgary, Alberta  
T2K 2L3

Attention: Vern Sparks

Dear Vern,

We have now been using the Ditch Hitch product for close to 9 months. This product was put to the test a number of times with our operations staff and I am pleased to inform you that Hunt Oil endorses this product in my area of responsibility.

We are moving towards all Hunt Oil Company vehicles having a minimum of 1 Ditch Hitch as well as a receiver mounted on the front of our vehicles. We have found the Ditch Hitch to be lightweight, user friendly, and in my opinion one of the safest towing products available on the market today. Hunt Oil would like to thank you for such a great product.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jim White".

Jim White  
Senior Safety Representative  
Hunt Oil Company of Canada, Inc.

SUITE 3100 450 FIRST STREET SW  
CALGARY ALBERTA  
T2P 5H1

# **Husky Oil Operations Limited**

---

P.O. Box 219  
Standard, Alberta, Canada  
T0J 3G0

(403) 644-3855  
Fax: (403) 644-3912

May 3, 2005

Tugko Inc.  
5004 Norquay Drive N.W.  
Calgary, Alberta  
T2K 2L3

Attention: Vern Sparks

Re: Ditch Hitch Product

Dear Vern;

After putting the Ditch Hitch to the test throughout the winter and spring break up seasons, I am pleased to inform you that Husky Energy endorses this product in my area of responsibility.

All operators in the Red Deer and Hussar production districts carry a Ditch Hitch in their company vehicles and I have yet to hear any negative comments on this product. A copy of your information package has been forwarded to all Safety Advisors at Husky Energy.

The Ditch Hitch is safe, lightweight, user friendly and in my opinion the best towing solution available today. Thanks for a great product.

Regards,



Alan Fritz  
Safety Advisor, Red Deer/Hussar Districts



**June 15<sup>th</sup>, 2005**

**Tugko Inc.  
5004 Norquay Drive N.W.  
Calgary, Alberta  
T2K-2L3**

**Attention: Vern Sparkes**

**Re: Ditch Hitch Product**

**Dear Vern,**

**After reviewing documentation on your product and actually seeing your product in use, I would like to say that I am very impressed with the construction and design of your new vehicle recovery mechanism.**

**It is truly by far the safest recovery system that I have seen to date. The safety features and ratings you have engineered into this product are exceptional and I would recommend this product to anyone who would ever require to be towed.**

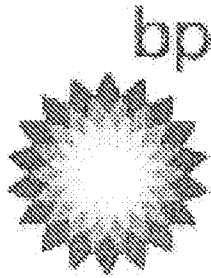
**Congratulations on your great innovation and I wish you all the success in the future on making this the recovery equipment of choice.**

**I would like to thank you once again for making our industry a safer place to work in with your great design.**

**I wish you all the best in the future with your great new product.**

**Best Regards.**

**Pierre Beliveau  
Senior Safety Specialist  
Drilling, Facilities, Seismic  
Nexen Inc.**



From: Bymoen, Shawn E [Shawn.Bymoen@bp.com]  
Sent: Monday, January 09, 2006 11:38 AM  
To: Vern Sparkes  
Subject: RE: Ditch Hitch Testimonial

Vern;

We have been providing the ditch hitch to our field operations and have received excellent feedback from those who have used them. The ditch hitch provides a safe, simple and effective way for connecting a tow strap to the vehicle.

Regards,

Shawn.



Feb. 7, 2008

Vern,

Just wanted to send you a quick thanks for introducing EnCana Corp to the Ditch Hitch system.

We now carry the Ditch Hitch in all our Peace Country Business unit vehicles, and with the addition of a specific procedure on where, when and how the Ditch Hitch is to be used we have all but eliminated "Towing Related" incidents.

The number of tailgates and rear windows lost made it clear that vehicle manufacturers did not intend for the Tow hooks to be used for anything but looks. The Ditch Hitch system takes the guess work out of attachment points on vehicles, and ensures the attachment point is capable of handling the load. We look forward to more innovative ideas from the Ditch Hitch Company, Keep up the good work.

**Renee Linssen**  
**EnCana Safety Services**  
*Safety Coordinator*  
**EnCana Canadian Foothills Division.**  
**Box 540**  
**Sexsmith, AB**  
**780 814 4436**  
**780 568 7153**

***"Safety and preventing injuries is about going home to your lives and your families everyday with your health unaffected by having worked that day".***



Jan. 21, 2010

ATCO Electric fully implemented our new vehicle recovery system midway through 2009. This includes the use of Ditch Hitch assembly on all our Class 1- 3, or light duty trucks, up to 6350 kg GVWR . Our assemblies are now designed to have the 2 " synthetic strap as the "fuse link", designed to break in case of a mechanical overload. This will prevent other parts of the recovery assembly (i.e. hitch receiver assembly, closed eyes, various recovery points) from being damaged. To my knowledge to date we have not had an incident involving injury or damage to equipment since we implemented the use of the Ditch Hitch. It's a great system and our staff have been very receptive to it's implementation. Way to go Ditch Hitch!

Warren Loughheed  
Work Methods Supervisor  
ATCO Electric

**DOCKET NO.:** 137159.00101  
**Application No.:** 10/595,982

## **EXHIBIT “C”**

### **OF DECLARATION OF MR. VERNON W. SPARKES**

# VEHICLE RECOVERY AND TOWING

## GUIDELINE

**JANUARY 2010**

Endorsed by



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## DISCLAIMER

This Guideline is a set of best practices and guidelines compiled by knowledgeable and experienced industry and government personnel. It is intended to provide the operator with advice regarding the specific topic. It was developed under the auspices of the Safety Services Department of Enform.

The recommendations set out in this Guideline are meant to allow flexibility and must be used in conjunction with competent technical judgment. It remains the responsibility of the user of the Guideline to judge its suitability for a particular application.

If there is any inconsistency or conflict between any of the recommended practices contained in the Guideline and the applicable legislative requirement, the legislative requirement shall prevail.

Every effort has been made to ensure the accuracy and reliability of the data and recommendations contained in the Guideline. However, Enform, its subcommittees, and individual contributors make no representation, warranty, or guarantee in connection with the publication of the contents of any Guideline recommendation, and hereby disclaim liability or responsibility for loss or damage resulting from the use of this Guideline, or for any violation of any legislative requirements.

## AVAILABILITY

This document, as well as future revisions and additions, is available from

Enform Canada  
1538 - 25 Avenue NE  
Calgary, AB T2E 8Y3  
Phone: (403) 250-9606  
Fax: (403) 291-9408  
Website: [www.enform.ca](http://www.enform.ca)

# TABLE OF CONTENTS

<b>Table of Contents .....</b>	<b>i</b>
<b>Preface .....</b>	<b>ii</b>
Purpose .....	ii
Audience .....	ii
Scope and Limitations.....	ii
Acknowledgements.....	iii
Background .....	iii
<b>Key Guidelines with Visuals.....</b>	<b>1</b>
#1 Rule: It is always best to call a tow truck! .....	1
<b>Procedures .....</b>	<b>5</b>
Step by Step Guide for Pulling out a Vehicle with a Recovery Strap.....	5
<b>Vehicle Mounted Winch Procedures.....</b>	<b>8</b>
Using a Vehicle Mounted Winch for Vehicle Recovery .....	8
<b>Additional Policy Items .....</b>	<b>11</b>
<b>Vehicle Recovery Kit.....</b>	<b>13</b>
<b>References .....</b>	<b>14</b>
Alberta .....	14
British Columbia.....	14
Saskatchewan .....	14

## **PREFACE**

### **PURPOSE**

The *Vehicle Recovery and Towing Guideline* has been developed to provide light and medium duty vehicle operators in the Petroleum Industry with a set of best practices to follow to avoid injury and damage while attempting to recover stuck vehicles.

By providing this Guideline, Enform hopes to increase awareness of safety issues and promote the safe usage of vehicles by personnel throughout the industry.

These guidelines are intended to establish the minimum standards of practice for vehicle recovery and towing within the Canadian Oil and Gas Industry.

### **AUDIENCE**

The document provides information to members of the Canadian Petroleum Industry wishing to establish or adopt a set of guidelines for vehicle recovery and towing. This document is intended to be used as a guide only and is not all inclusive. The Guideline herein sets out in general principal the actions necessary when conducting basic vehicle recovery operations.

This Guideline has also been published in two different "Glove Box Edition" formats which can be used as is or adapted by companies within the Canadian Oil and Gas Industry.

### **SCOPE AND LIMITATIONS**

The information in this guideline is for the recovery and towing of light to medium duty vehicles only.

## ACKNOWLEDGEMENTS

The following individuals helped develop this Guideline through Enform. They represent a wide cross-section within the Petroleum Industry and provided forward-thinking views, as well as insightful recommendations to address the practical challenges of safe and effective vehicle recovery . We are grateful for each participant's efforts. We also wish to acknowledge the support of the employers of individual committee members.

### Development

Name	Company	Organization Represented
Andy Reimer	Culture Codes	Enform

### Review

Name	Company	Organization Represented
Marvin Lebeau	Geokinetics	CAGC
Kelli Tonge	Canadian Association of Geophysical Contractors	CAGC
Jason Winsor	Baker Hughes/Enform	PSAC
Vern Sparks	Ditch Hitch	PSAC
Murray Sunstrum	EnCana	CAPP
Stephan Dobrostanski	Spectra	CEPA
Iain McIntosh	Suncor/Petro Canada	CAGC
Roy McKnight	Enform	

## BACKGROUND

This document was developed at the request of the Canadian Association of Geophysical Contractors.

## KEY GUIDELINES WITH VISUALS

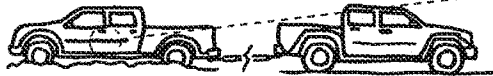
### #1 RULE: IT IS ALWAYS BEST TO CALL A TOW TRUCK!

However, if your company permits and equips you to pull out stuck vehicles, these are the do's and do not's that you **MUST ALWAYS RESPECT!**

---

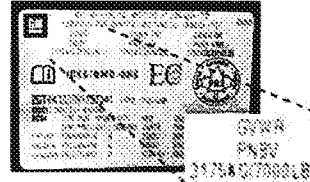


DO NOT use a lighter vehicle to pull out a heavier vehicle.



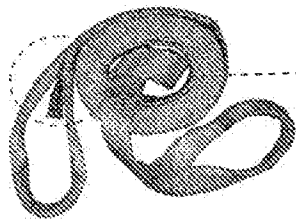
ONLY pull with a vehicle roughly the same size or larger than the stuck vehicle.

Check vehicle weight (GVW) on a plate on the driver door (add load!)





DO NOT use tow straps, chains, or cables that can become killer metal missiles! DO NOT use a web sling.

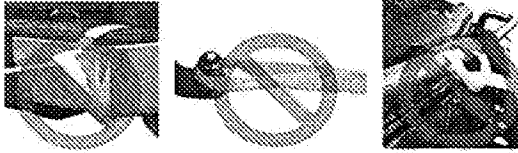


ONLY use a recovery strap with proper loops.

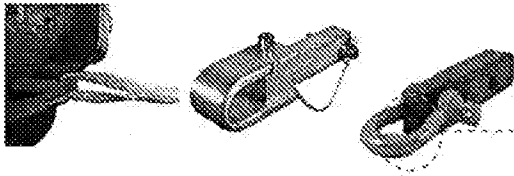
Check Minimum Breaking Strength (MBS)—should be 2-3 times stuck vehicle weight.

BREAKING STRENGTH	15,000 LBS (6,800 KG)
RESISTANCE TO RUPTURE	15,000 LBS (6,800 KG)
MINIMUM VEHICLE WEIGHT	5,000 LBS (2,270 KG)
POSSIBLE MAXIMUM OF VEHICLE	15,000 LBS (6,800 KG)



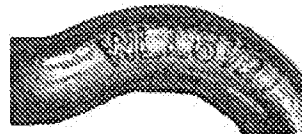


DO NOT attach to bumpers, ball hitches, bull bars, or tie down eyes. These can tear free under towing stress.



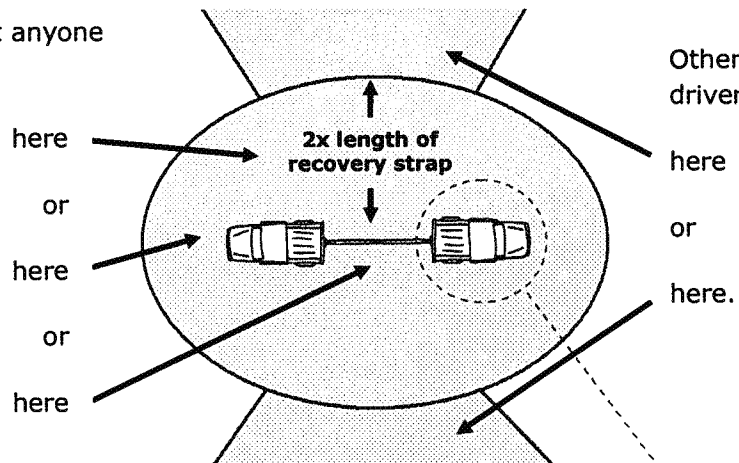
ONLY attach recovery strap securely to a load rated component, i.e., loop onto tow hooks, engineered recovery device or on shackle with pin in hitch receiver.

Check Working Load Limit (WLL) of shackle—should exceed recovery strap strength. Frame mounted receiver also needs to be rated to the required weight.



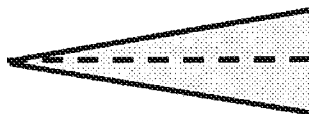
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DO NOT let anyone  
stand...



Other than the two  
drivers, everyone is...

Align the vehicles so they  
are within 10 degrees of a  
straight line.



# PROCEDURES

## STEP BY STEP GUIDE FOR PULLING OUT A VEHICLE WITH A RECOVERY STRAP

1. Stop, consider the task at hand and assess the hazards.
  - If you have any questions or doubts at this point, call a tow truck, it remains your best option.
  - Use the checklist provided at the end of this document to make a safe decision.
2. If the vehicle recovery takes place on or near a roadway, you must implement a traffic warning or traffic control system (e.g., traffic cones or reflector flares).
3. Ensure that you have the correct equipment—a recovery strap is essential.
  - The recovery strap should be at least 6 m or 20 ft in length, with loops (not hooks) and in good working condition (no cuts or broken stitches).
  - If you do not have a recovery strap like this at hand, call a tow truck.
4. Check both vehicle weights and add the weights of any loads either vehicle is carrying.
  - The vehicle doing the pulling must be of equal or, ideally, greater weight than the vehicle that is being pulled.
5. Ensure the recovery strap has a Minimum Breaking Strength (MBS) that is 2-3 times the total weight of the stuck vehicle.
  - If it is less, the danger is the strap may snap under high tension.
  - If the MBS is greater, it will not function optimally (they are most effective when their elasticity enhances the pull).
  - Recovery straps are usually constructed so that each inch of width adds approximately 10,000 lbs (4,500 kg) of MBS (e.g., a 3 inch wide strap would usually have a rating of approximately 30,000 lbs [13,500 kg]).
6. Ensure tow hooks, hitch receivers and any shackles used are rated to loads that exceed the recovery strap MBS. In the event of excessive loads, the recovery strap should always be the weakest link and snap first.
  - A shackle should have a Working Load Limit (WLL) stamped on it (remember 1 ton = 2000 lbs or 900 kg).
7. As much as possible, clear out mud, sand, or snow from under the stuck vehicle and in front of the tires in the direction of the pull.
8. Position the pulling vehicle in line with the stuck vehicle—the pulling vehicle facing forward; the stuck vehicle being pulled from the front (ideally) or the back.
  - You need to be within 10° of a straight line—side loading can lead to serious vehicle damage.
  - You need to be sure you have a clear path straight forward free of any obstacles that is at least the length of the strap and stuck vehicle.

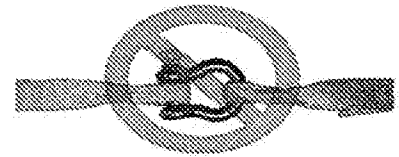
9. Lay out the recovery strap between the two vehicles and loop the strap onto a tow hook bolted to the vehicle frame or put the loop on a shackle which is properly pinned to a frame mounted hitch rated for recovery.
- If using a threaded shackle, hand tighten the pin and then turn it back one quarter turn for ease of release later.
  - Never tie the strap onto the vehicle, slip the strap over a ball hitch, or attach it to anything other than a tow hook or frame mounted hitch.
  - Only use one recovery strap (never two in parallel)—however, there are two options for creating additional length with two recovery straps if needed:



Double length by threading straps through each other's eye. A rolled newspaper stuck between the loops provides a safe means of undoing the knot later.



Gain 50% more length by looping one strap through the eye of another.



Never use a shackle to join two straps—if a strap fails, it becomes a deadly projectile.

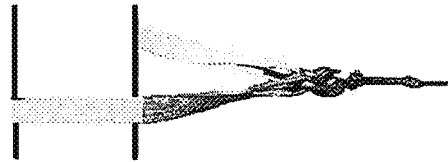
- Reduce the expected strength of the recovery straps by 25% if you are using two correctly joined straps.
10. Drape a heavy coat or blanket over the middle of the strap to dampen any backlash if it snaps or releases.
11. Agree on a plan and communication signals between the two drivers. Industry Recommended Practice Hand Signals for Directing Vehicles (IRP 12) provides a good system of signals to use.
12. Ensure all other bystanders are at least 2 times the length of the recovery strap to the side of the vehicles—both the strap and the vehicles lurching forward unexpectedly present a hazard.
13. The pulling vehicle accelerates slowly (to about 10-12 KPH) to build tension in the strap and provide a sustained pull. Once the slack is taken up, the stuck vehicle likewise applies acceleration in low gear to assist the pulling car. Neither vehicle should spin their tires.
- Steady momentum is most effective—never resort to jerking or take a long run and jerk.
  - Maintain tension throughout the pull, do not allow slack to develop in the strap at any point.
  - After three attempts to pull the vehicle loose, it is time to stop and call a tow truck.
14. Do not remove straps until both vehicles are fully stopped and secured.
- It is a good idea to clean and dry out a recovery strap after use as dirt and moisture weaken the strap.

**Remember, if at any point in the process you have any safety concerns whatsoever or concerns about potential damage to either vehicle, stop and call a certified tow truck.**

# VEHICLE MOUNTED WINCH PROCEDURES

## USING A VEHICLE MOUNTED WINCH FOR VEHICLE RECOVERY

1. Only use a vehicle mounted winch for vehicle recovery if you have had proper training on the safe and correct use of the winch.
2. Always wear heavy leather gloves when working with a winch.
3. Inspect the winch cable—never use a winch with a frayed winch line.
4. When one vehicle is winching out another, ensure both vehicles are in neutral (not park) and that the non-stuck vehicle has its parking brake engaged (ideally with transfer case in 4 wheel drive mode).
5. Only perform a self-recovery if you have a solid anchor point and a web sling ("tree saver strap") and shackle configuration rated to exceed your winch capacity.



The right way to do it: A web sling (tree saver strap) with winch cable hooked to the shackle pin—with a safety latch on the hook that is properly engaged. Never simply wrap the winch cable around an anchor point and hook it back on itself. Never use a recovery strap for this purpose. Always position the tree saver as low to the ground as possible.

6. Drape a heavy coat or blanket over the cable—this will dampen the recoil in the event of a cable or hook failure.
7. If winch controls permit, work as much to one side as possible, out of the recoil line of fire.
8. With a front mounted winch, always raise your hood—especially if your setup requires you to be in the vehicle during winching.

**Remember, if at any point in the process you have any safety concerns whatsoever or concerns about potential damage to either vehicle, stop and call a certified tow truck.**

**Pre-job checklist if using a vehicle recovery strap (a "no" on any of the following requires the user to call a tow truck):**

Do both parties involved have permission from their respective companies to perform a vehicle recovery?	Yes	No
Have you checked and considered the gross vehicle weight (including loads) of both vehicles?	Yes	No
Is the total weight of the recovery vehicle equal or greater than the total weight of the stuck vehicle?	Yes	No
Do you have a recovery strap with a Minimum Breaking Strength (MBS) that is 2-3 times the total weight of the stuck vehicle?	Yes	No
Is the recovery strap in good working condition (no visible tears or other damage)?	Yes	No
Do you have an appropriate attachment point on both vehicles?	Yes	No
If using a shackle, does it have a Working Load Limit (WLL) that is greater than that of the recovery strap?	Yes	No
Do you have a coat or heavy blanket to lay over the middle of the recovery strap?	Yes	No
Can you line up the recovery vehicle with the stuck vehicle?	Yes	No
Is the towing route free of any obstacles or hazards (e.g., trees or boulders)?	Yes	No
Have you set up the necessary traffic control system?	Yes	No
Have you established clear communication signals between the two drivers?	Yes	No
Do both drivers understand the correct procedure for the recovery attempt?	Yes	No
Have you clearly communicated the dangers and established a perimeter of 2 times the distance of the recovery strap for any bystanders?	Yes	No
Do both drivers understand that after three failed attempts, a tow truck must be called in?	Yes	No
Do both drivers understand the hazards of a recovery attempt, especially the deadly danger of recoil should any components fail?	Yes	No
Have you taken the time to consider any other possible hazards presented by your particular situation?	Yes	No
Has the risk to personal safety or the risk of equipment damage been assessed to be at an acceptable level?	Yes	No

**Pre-job checklist if using a winch for vehicle recovery (a "no" on any of the following requires the user to call a tow truck):**

Have you been provided clear instruction on the safe and correct use of the winch equipment that will be utilizing for the recovery?	Yes	No
If one vehicle is winching out another, is the total weight of the recovery vehicle equal or greater than the total weight of the stuck vehicle?	Yes	No
Is the winch motor and cable rated to the total weight of the stuck vehicle?	Yes	No
Do you have heavy leather gloves available to protect your hands?	Yes	No
Is the winch and cable in good condition?	Yes	No
If using a shackle, does it have a Working Load Limit (WLL) that is greater than that of the winch?	Yes	No
If attaching to an anchor point, do you have a proper strap and shackle configuration with an adequate load rating to attach your winch cable?	Yes	No
Does your anchor point or overall setup allow you to winch the stuck vehicle out in a relatively straight line?	Yes	No
Have you set up the necessary traffic control system?	Yes	No
Have you established clear communication signals between all participants?	Yes	No
Have you clearly communicated the dangers and established a perimeter of 2 times the distance of the uncoiled cable for any bystanders	Yes	No
Does everyone involved understand the hazards of a recovery attempt, especially the deadly danger of recoil should any components fail?	Yes	No
Have you raised the hood of the winching vehicle and draped a coat or heavy blanket over the winch cable?	Yes	No
Have you taken the time to consider any other possible hazards presented by your particular situation?	Yes	No
Has the risk to personal safety or the risk of equipment damage been assessed to be at an acceptable level?	Yes	No

**Always remember, a certified tow truck is always your best option in vehicle recovery.**

## **ADDITIONAL POLICY ITEMS**

Vehicle recovery apart from the use of a licensed tow truck and tow truck operator carries a level of risk and each company must consider the level of risk it is willing to incur in developing a company-specific policy. The guidelines in this document are just that, guidelines. They have been created with a view to preventing the most common mistakes individuals make in attempting vehicle recovery on their own. Companies are free to adapt or further develop these as they wish in developing their own vehicle recovery policies and procedures. Listed below are items a company developing a vehicle recovery policy may wish to consider:

1. There may be a need to specify that towing a disabled vehicle any distance is beyond the scope of "vehicle recovery" proper. It may be prudent to allow a vehicle to be towed a very short distance out of a high traffic area. This vehicle recovery guideline is designed with the notion that the stuck vehicle is capable of assisting with the recovery and will be fully capable of driving once pulled out.
2. There may be a need to specify terrain specific requirements. For example, steep terrain provides additional hazards including the danger of the recovering vehicle losing traction and sliding downhill as well as the increased load created when pulling a vehicle uphill. Heavy mud would also increase the load.
3. Companies with a fleet of vehicles may consider ensuring the strength rating of vehicle tow hooks and/or hitch receivers is clearly communicated to vehicle drivers in some fashion.
4. Companies may also consider providing concrete illustrations of correct towing procedures based on the vehicles in their fleet.
  - E.g., a GMC Sierra Half-Ton 4x4 with a GVW of 3175 kg (7000 lbs) can be pulled out using a recovery strap with a Minimum Breaking Strength (MBS) between 6350-9525 kg (14,000-21,000 lbs) and if using a shackle on a hitch receiver, its WLL must be greater than 9525 kg or approximately 10.5 tons.
5. Companies that provide recovery straps to their drivers may also specify a policy on re-use or strap inspection based on the manufacturer's criteria. Straps degrade with repeated use (and particularly repeated use without an interval to allow the strap to recover from being stretched) or if they are allowed to remain dirty. A post-recovery procedure that includes cleaning the recovery strap may also be appropriate.
6. Vehicle recovery training may be deemed a prerequisite to enacting a vehicle recovery. Certainly in the case of vehicle winches, this guideline presumes training is a prerequisite to winch use.

7. Companies looking to include a policy on vehicle assistance on steep grades should consult *Engineering Update: Vehicle Assistance on Steep Grades*, a very useful document created by WorkSafeBC

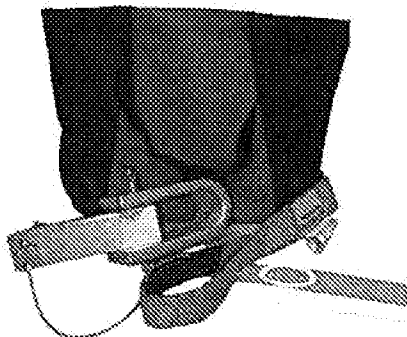
## VEHICLE RECOVERY KIT

A company with a vehicle recovery policy may well consider it prudent to provide its employees and/or fleet vehicles with a vehicle recovery kit that enables a recovery that aligns with its policies on vehicle recoveries. The following are components a company could consider for inclusion in a vehicle recovery kit:

- Easy to use vehicle recovery instructions
  - This document is available in a glove box edition to serve as such
  - Include a safety checklist
- Recovery Strap
  - Ensure it has an Maximum Breaking Strength (MBS) that is 2-3 times vehicle weight
- Recovery hitch and shackle
  - For vehicles with hitch receivers rated for recovery
  - Ensure vehicle hitch receiver and all components (especially pins) are sufficiently rated for recovery
- Collapsible shovel
- Traffic cones or reflector flares
- Heavy blanket
  - Multi-purpose but can be placed over recovery strap or winch cable to prevent recoil in event of breakage or release.
- Heavy leather gloves

### **Commercially available vehicle recovery kits:**

There are also commercially available vehicle recovery kits. The example below includes a carrying bag, recovery strap, engineered recovery device designed for a hitch receiver, and a reflector to slide over the recovery strap.



# REFERENCES

## **ALBERTA**

Alberta Occupational Health and Safety Act, Regulation and Code 2009  
Alberta Traffic Safety Act

Off-Highway Vehicle Regulation, Alta. Reg. 319/2002

Use of Highway and Rules of the Road Regulation

## **BRITISH COLUMBIA**

British Columbia Occupational Health and Safety Regulation  
Worker's Compensation Act, Part 3 – Occupational Health and Safety

*Engineering Update: Vehicle Assistance on Steep Grades* (WorkSafeBC EU 2009:01)

## **SASKATCHEWAN**

The Occupational Health and Safety Act, 1993

The Occupational Health and Safety Regulations, 1996